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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In the Patent Application of:

DIANNE D. MUELLER ET AL.

Serial No.: 09/977,775

Filed: October 15, 2001

For: A REFRIGERATED OVEN

Group Art Unit: 3753

Examiner: Ciric, Lilijana V.

APPEAL BRIEF
(Amended)

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is an Appeal Brief pursuant to 37 C.F.R. §41.37 in support of Applicants' appeal of the Final Rejection of the Examiner, mailed March 25, 2005, of claims 1-11 and 14-20. Each of the topics required by 37 C.F.R. §41.37 is presented herewith and is labeled appropriately.

I. REAL PARTY IN INTEREST

Whirlpool Patents Company, having offices in St. Joseph, Michigan ("Whirlpool") is the real party in interest of the present application. An assignment of all rights in the present application to Whirlpool was executed by the inventors and recorded in the U.S. Patent and Trademark Office at Reel 012373, Frame 0260.

II. RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences related to the present application of which Appellants or Appellants' legal representatives are aware.

III. STATUS OF CLAIMS

Claims 1-46 were in the application as filed. Pursuant to the Office Action mailed August 12, 2003, requiring an election of species, claims 27-46 were cancelled without prejudice in the Amendment filed November 13, 2003. Claims 1-11 and 14-20, which are presented in the Appendix, are pending in the application and have been twice rejected by the Examiner. Claims 12, 13, and 21-26, which are presented in the Appendix, are pending in the application and have been objected to by the Examiner as dependent upon a rejected base claim. Accordingly, Appellants hereby appeal the final rejection of claims 1-11 and 14-20.

IV. STATUS OF AMENDMENTS

No amendments were filed subsequent to final rejection, and all amendments have been entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The invention is an appliance for alternately refrigerating and cooking a food item. As illustrated in Figure 1 from the application, the appliance **10** comprises a frame **12** having a cooking chamber **14** and a refrigeration module chamber **16**. *Application, p.8, ln. 22-24.* The cooking chamber **14** has an access opening **38** into the cooking chamber **14**, *Id., p.8, ln. 30-31,* selectively closeable with a door **56**, *Id., p. 9, ln. 8-13.* A heating element **75** is disposed within the cooking chamber **14** to selectively provide heat to the cooking

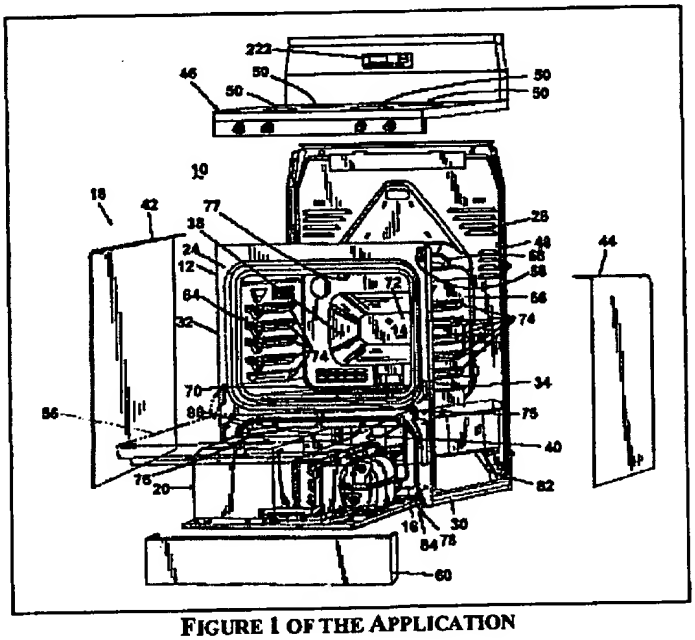

FIGURE 1 OF THE APPLICATION

chamber **14**, *Id., p. 9, ln. 27-28.*

As illustrated in Figure 7 from the application, a refrigeration module **20** comprises a compressor **122**, a condenser **142**, and an evaporator **150**, all of which are mounted to a supporting base **120** to form a modular assembly, *Id., p. 11, ln. 19- 25.* An insulated housing **168** overlies the evaporator **150** to thermally isolate the evaporator **150** from the condenser **142**, *Id., p. 13, ln. 4-6.* The refrigeration module **20** is installed in the refrigeration module chamber **16** through an access opening **40** into the refrigeration module chamber **16**, which is selectively closeable by a cover **60**, *Id., p. 8, ln. 26-28, 30-31; p. 9, ln. 16-18; p. 11, ln. 22-25.*

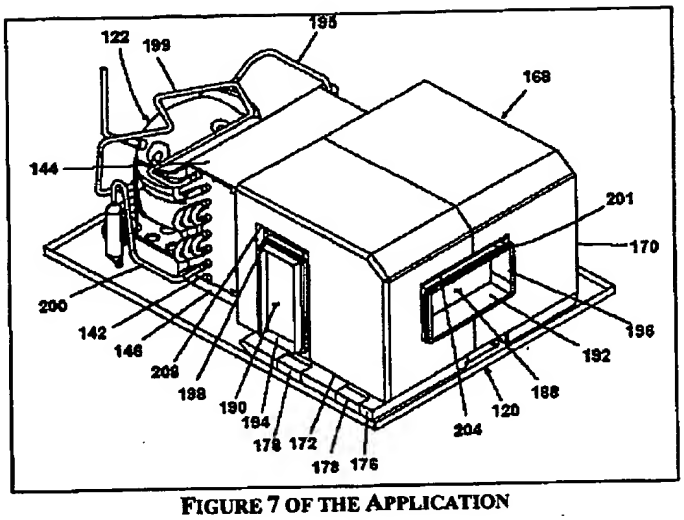

FIGURE 7 OF THE APPLICATION

The cooking chamber **14** and the refrigeration module chamber **16** are fluidly connected by an inlet duct **90** and a return duct **92**, *Id., p. 10, ln. 10-11.* The inlet duct **90** has an inlet **94** in communication with the refrigeration module chamber **16** and an outlet **96** in communication with the cooking chamber **14**, *Id., p. 10, ln. 11-18.* The return duct **92** has an inlet **98** in communication with the cooking chamber **14** and an outlet **100** in communication with refrigeration module chamber **16**, *Id.* The insulated housing **168** has an inlet **194** and an outlet **192**, which align with the outlet **100** of the return duct **92** and the inlet **94** of the inlet duct **90**, respectively, when the refrigeration module **20** is mounted within the refrigeration module chamber **16** to thereby form a refrigerated air path **A** between the evaporator **150** and the cooking chamber **14**, *Id., p. 10, ln. 19-27; p. 13, ln. 30-31; p. 14, ln. 1-4.*

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. In the Office Action of June 25, 2005, the Examiner rejected claims 1-4 and 16-20 under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent No. 6,497,276 to Clark et al. ("Clark"). Appellants disagree with the Examiner's assertion that the Clark reference anticipates claims 1-4 and 16-20.

2. In the Office Action of June 25, 2005, the Examiner rejected claims 5-11 and 14 as obvious under 35 U.S.C. §103(a) over the Clark reference. Appellants disagree with the Examiner's assertion that the Clark reference renders claims 5-11 and 14 obvious to one skilled in the art.

3. In the Office Action of June 25, 2005, the Examiner rejected claim 15 as obvious under 35 U.S.C. §103(a) over the Clark reference in view of U.S. Patent No. 6,408,841 to Hirath et al. Appellants disagree with the Examiner's assertion that the Clark and Hirath references render claim 15 obvious to one skilled in the art.

VII. ARGUMENT

1. Rejection Under 35 U.S.C. §102(e)

The claimed invention is not anticipated under §102 unless each and every element of the claimed invention is found in the prior art. *Hybritech, Inc. v. Monoclonal Antibodies, Inc., 231 USPQ 81, 90 (Fed. Cir. 1986).* To anticipate, a single reference must teach each and every limitation of the claimed invention. *Eolas Technologies Inc. v. Microsoft Corp., 399 F.3d 1325, 1335; 73 U.S.P.Q.2D (BNA) 1782 (Fed. Cir. 2005).* The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).* The Examiner has failed to adhere to these requirements with respect to claims 1-4 and 16-20. Thus, the anticipation rejection of claims 1-4 and 16-20 should be overturned.

Claims 1-4

Claim 1 is the sole independent claim and is directed to a combination appliance for cooling and cooking a food item comprising a frame with a cooking chamber and a refrigeration

module chamber. An inlet duct extends between the refrigeration module chamber and the cooking chamber, and a return duct extends between the refrigeration module chamber and the cooking chamber. Claim 1 further calls for a refrigeration module comprising a compressor, a condenser, an evaporator, and a base on which the compressor, the condenser, and the evaporator are mounted to form a module. The refrigeration module further comprises an insulated housing that overlies the evaporator to thermally isolate the evaporator from the condenser and has an inlet and an outlet that align with the return duct and the inlet duct, respectively, when the refrigerator module is mounted within the refrigeration module chamber to form a refrigerated air path between the evaporator and the cooking chamber.

As relevant to the anticipation rejection in view of Clark, claim 1 expressly calls for a module comprising a compressor, a condenser, and an evaporator, all mounted to a base along with an insulated housing overlying the evaporator to thermally isolate the evaporator from the condenser. Clark does not disclose such a module and, as such, it does not anticipate claim 1.

A module is "One of a series of production units or component parts that are standardized to facilitate assembly or replacement and are usually prefabricated as self-contained structures." *The Oxford English Dictionary, 2d Ed., Clarendon Press (1991).* This is precisely the concept of "module" employed in claim 1. Additionally, the Description of the Preferred Embodiment explains the "modularity" of the refrigeration module. This is defined both in terms of the arrangement of the individual components comprising the module, as well as the manner in which the module interrelates with the rest of the appliance:

> "Since all of the components for the modular refrigeration unit 20 are mounted on the base 120, the modular refrigeration unit 20 is easily slid into and out of the refrigeration unit chamber 16 to simplify the installation and maintenance of the modular refrigeration unit 20. *Application, p. 11, ln. 22-25....* The seal 196 and gasket 198 are located on the flanges 192, 194 such that they fluidly seal the evaporator housing 160 with respect to the cold air duct 90 and return duct 92 upon the sliding insertion of the modular refrigeration unit 20 within the refrigeration unit chamber 16. Specifically, the peripheral flange 194 is received within the outlet 100 of the return air duct 92 and the gasket 198 is compressed between the housing side wall 164 and the duct 92 to form a fluid seal therebetween. The seal 196 is slidably

received within the open side edge of the cold air duct 90 formed by the hinged movement of the side portion 108 to an open position. When the modular refrigeration unit is completely received within the refrigeration unit chamber 16, the seal 196 abuts the inner edge of the inlet 94." *Id., p. 14, ln. 5-14.*

See also Figure 7, supra. Thus, the compressor, condenser, and evaporator of claim 1 are mounted on a movable base to form an integrated unit, which can be easily inserted into and removed from the refrigeration unit chamber to simplify the installation and maintenance of the modular refrigeration unit. This simplified installation and maintenance is possible because the only fluid passageways that must be broken when the modular refrigeration unit is removed from the refrigeration unit chamber are the air flow passageways. No refrigerant lines need be severed because the entire refrigerant system is self-contained on the movable base in the refrigeration unit chamber.

Clark discloses a combined refrigerator-oven 20 comprising a chamber 28 and a drawer 68 slidably mounted below the chamber 28. The drawer 68 houses a compressor 76, an evaporator 78, and an expansion valve 79 of a refrigeration unit 70. As illustrated in Figure 3 of Clark, a condenser 90 of the refrigeration unit 70 is mounted to the exterior of the back wall 26 of the refrigerator-oven 20 so that the condenser 90 is not visible when refrigerator-oven 20 is in place. *Clark, col. 4, ln. 29-34.* The evaporator 78 includes a cool air duct 80 and a warm air duct 112 that fluidly communicate with an airflow inlet opening 54 and an airflow outlet opening 56 in a bottom wall 24 of the chamber 28 when the drawer 68 is slid below the chamber 28. In operation, refrigerant flows through the refrigeration unit 70 as air warm flows from the chamber 28 and through the warm air duct 112 to the evaporator 78, where it is cooled by the refrigeration unit 70 before flowing back to the chamber 28 through the cool air duct 80.

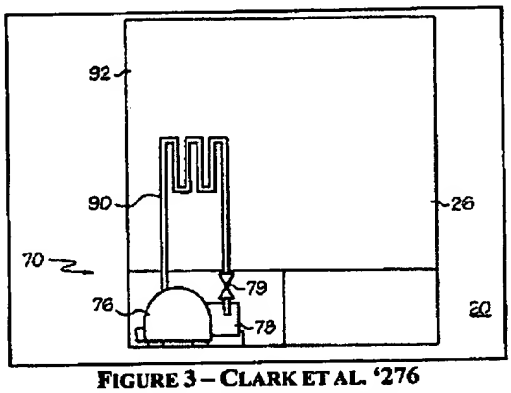

FIGURE 3 – CLARK ET AL. '276

The Clark refrigeration system is not in the form of a module. The compressor 76 and the evaporator 78 of the Clark refrigeration unit 70, whether installed in the refrigerator-oven 20 or in the adapter kit 186, are mounted within the replacement drawer 68, while the condenser 90 is mounted outside the drawer 68 on an exterior surface of the refrigerator-oven 20 away from the compressor 76 and the evaporator 78. If the compressor 76 and the evaporator 78 must be removed from the refrigerator-oven 20, the refrigerant lines connecting the compressor 76 and the evaporator 78 to the condenser 90 must be severed, a complicated task that involves carefully removing and capturing the refrigerant from the system, disconnecting the lines joining the condenser to the rest of the system, reconnecting the lines with a replacement compressor and/or evaporator, and replacing the refrigerant in the system. This in no way is the claimed refrigeration module required by claim 1

Claim 1 expressly calls for the refrigeration system to be a module. Claim 1 expressly requires that the compressor, the evaporator, and the condenser are all mounted on a base to form a removable module that fits entirely within the refrigeration module chamber. Because Clark does not disclose the claimed modular refrigeration system of claim 1, Clark does not disclose "each and every limitation" of claim 1, and claim 1 is thus not anticipated by Clark.

Claim 1 is further not anticipated by Clark in that claim 1 expressly calls for the refrigeration module to include an insulated housing overlying the evaporator to thermally isolate the evaporator from the condenser. Clark does not disclose such an insulated housing. Nowhere in Clark is there any mention of an insulated housing for the evaporator. The only conceivable housing of any type is the drawer 68, and there is no mention of the drawer 68 being insulated.

It is asserted in the Office Action that Clark inherently discloses insulation in that the air that surrounds the evaporator is insulative. However, claim 1 specifically requires a structure, i.e. an insulated housing, overlying the evaporator, and the air surrounding the evaporator is not such a structure. Furthermore, the air within the drawer 68 is warm air that circulates from the chamber 28 to the evaporator 78 to be cooled and, therefore, transfers heat *to* the evaporator 78. Additionally, due to the proximity of the drawer 68 to the bottom wall 24 adjacent the heating unit 50, the air in the drawer 68 is also heated by conduction of heat from the chamber 28

through the bottom wall 24. In short, heated air in the drawer 68 functions to convectively heat the evaporator 78 rather than insulate the evaporator 78. Significantly, if the air in the drawer 68 of Clark were sufficient to thermally isolate the evaporator, then it would not be necessary to mount the condenser 90 outside of the drawer 68.

As explained above, the refrigeration unit of Clark is not modular, the condenser of Clark is not mounted to a base that also mounts the compressor and the evaporator, and the evaporator of Clark does not have an insulating housing, as required by claim 1. Because these limitations of claim 1 are not disclosed in Clark, claim 1 is not anticipated by Clark.

Claims 2-4 are allowable over Clark based on their direct dependency from claim 1, for the reasons set forth above.

Claim 16

Claim 16 depends from claim 1 and is not anticipated by Clark for the same reasons as claim 1. In addition to the limitations of claim 1, claim 16 expressly calls for at least a portion of the base to be thermally conductive. Clark does not disclose a base having at least a portion thermally conductive. Furthermore, claim 16 expressly calls for the condenser to be conductively mounted to the base to transfer heat from the condenser to the thermally conductive portion of the base. Clark does not disclose this limitation. As such, Clark does not anticipate claim 16.

As explained above, the condenser 90 of Clark is mounted to the vertical side wall 26 rather than the drawer 68, and Clark does not describe the thermal properties of the vertical side walls 26. Even if the condenser 90 were mounted to the drawer 68, Clark does not address the thermal properties of the drawer 68. Hence, Clark does not anticipate claim 16 because it does not disclose a base that mounts the condenser and has a thermally conductive portion, and also based on its direct dependency from claim 1, for the reasons set forth above.

Claims 17-20

Claims 17 and 18 depend from claim 16. Claims 19 and 20 depend from claim 18. Claims 17-20 are not anticipated by Clark based on their direct or indirect dependency from

claims 1 and 16, and also for the reasons presented below.

Claim 17 depends from claim 16 and adds a thermally conductive mount connecting the condenser to the base to conduct heat from the condenser to the base. In addition to the limitations of claim 16, Clark does not disclose a thermally conductive mount connecting the condenser 90 to a base to conduct heat from the condenser to the base. Thus, claim 17 is not anticipated by Clark.

Claim 18 also depends from claim 16 and specifies that the evaporator is thermally isolated from the base to retard conduction of heat from the base to the evaporator. In addition to the limitations of claim 16, the evaporator 78 in Clark is mounted to the drawer 68, and Clark discloses nothing of how the evaporator is mounted to the drawer or whether there is any thermal isolation of the evaporator 78 from the drawer 68. Thus, claim 18 is not anticipated by Clark.

Claims 19 and 20 depend from claim 18 with the further limitations that at least a portion of the base is made of thermally non-conductive material, and the evaporator is mounted to the thermally non-conductive material or with a thermally non-conductive mount to thermally isolate the evaporator from the base. Because these limitations are not disclosed in Clark, claims 19 and 20 are not anticipated by Clark.

2. Rejection Under 35 U.S.C. §103(a)

> A claimed invention is unpatentable if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art....The ultimate determination of whether an invention would have been obvious under 35 U.S.C. §103(a) is a legal conclusion based on underlying findings of fact.[1]
>
> A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art

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[1] The underlying factual inquiries include (1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; and (3) the differences between the claimed invention and the prior art. *Graham v. John Deere Co., 383 U.S. 1, 17, 15 L. Ed. 2d 545, 86 S. Ct. 684 (1966).*

> references and the then-accepted wisdom in the field....Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher."
>
> Most if not all inventions arise from a combination of old elements....Thus, every element of a claimed invention may often be found in the prior art....However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention....Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant....Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference.
>
> The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved....In addition, the teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references....The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art....Whether the Patent Office Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto....Broad conclusory statements standing alone are not "evidence."

In Re Werner Kotzab, 217 F.3d 1365; 55 U.S.P.Q.2d (BNA) 1313 (Fed. Cir. 2000)(citations omitted).

Claims 5-11 and 14

Although claim 1 was not rejected under 35 U.S.C. 103(a) as being unpatentable over Clark, claims 5-11 and 14 depend directly or indirectly from claim 1. As claim 1 is not obvious in view of Clark, nor are claims 5-11 and 14, which include the limitations of claim 1.

As previously described with regard to the anticipation rejection, claim 1 expressly calls

for a refrigeration module of the combination appliance as comprising a compressor, a condenser, and an evaporator all mounted to a base to form a module that can easily be installed as a single unit, with an insulated cover overlying the evaporator to thermally isolate it from the condenser. The refrigeration unit 70 of Clark is not modular; the condenser 90 is mounted to the outside of the vertical side wall 26 and separate from the compressor 76 and the evaporator 78. Indeed, with this construction, Clark teaches away from a *modular* refrigeration unit. Thus, Clark fails to teach or suggest an entire limitation required by claim 1: a refrigeration module.

Further, there is no showing by the Examiner of any motivation, suggestion or teaching of moving the condenser 90 of the Clark refrigeration unit 70 from the back of the oven into the drawer 68 with the compressor 76 and the evaporator 78, or the benefits of doing so. There is also no showing by the Examiner of any motivation, suggestion or teaching of mounting the compressor 76, the evaporator 78, and the condenser 90 on a common base, presumably because to mount the three components on a common base would lead to undesirable and potentially detrimental thermal transfer between the condenser 90 and the evaporator 78.

Claim 1 expressly requires that the refrigeration module include an insulated housing to eliminate such detrimental thermal transfer, which is important when all three components are mounted to a common base. If all three refrigeration components (i.e. compressor, condenser, evaporator) are to form a module, the condenser must be insulated relative to the evaporator. Clark is not concerned with this limitation because the condenser, being mounted to the exterior of a side wall, is isolated from the rest of the refrigeration system. Clark does not require an insulated housing precisely because the refrigeration unit does not form a module. Thus, claim 1 is not obvious over Clark.

Claims 5-11 and 14 depend directly or indirectly from claim 1, and relate to the air ducts to and from the refrigeration module chamber and the walls separating the refrigeration module chamber and the cooking chamber. Because claim 1 is not obvious in view of Clark, claims 5-11 and 14 are inherently not obvious in view of Clark. Additionally, several of claims 5-11 and 14 are independently patentable over Clark for the reasons presented below.

Claim 5 defines the outlet of the inlet duct and the inlet of the return duct as extending

through a peripheral wall of the cooking chamber. In Clark, both the inlet 54 and the outlet 56 are specifically described as located in the bottom wall 24 of the chamber 28 and are shown in the figures as disposed directly above the drawer 68 that mounts the evaporator 78 of the refrigeration unit 70. Clark does not teach or suggest positioning the inlet 54 and the outlet 56 elsewhere in the chamber 28.

The Examiner has repeatedly taken the position that shifting the location of parts is generally a matter of design choice and thus not inventive. Applicants requested in accordance with MPEP §2144.03 that the Examiner provide a copy of a reference that teaches or suggests that placement of the inlet and the outlet is a design choice. This request was never honored.

The positions of the inlet and the outlet in Applicants' refrigerated oven are selected to optimize the circulation of air through the cooking chamber, as described at p.10, ln. 28 – p. 11, ln. 9 of the Application. Had Clark been in possession of the novelty and utility of the placement of the inlet 54 and the outlet 56 in the vertical side walls 26 for improved air circulation, Clark could have easily described such a location for the inlet 54 and the outlet 56. However, Clark's own description indicates that positioning the inlet 54 and the outlet 56 in the vertical side walls 26, as required in claim 5, was not contemplated. Consequently, claim 5 is not obvious in view of Clark.

Claims 6-10 depend from claim 5 and further define the positions of the inlet and outlet within the cooking chamber. For at least the same reasons as presented above with respect to claim 5, positioning the inlet 54 and the outlet 56 as described in claims 6-10 was not contemplated by Clark and is not obvious in view of Clark.

Claim 14 depends from claim 5 and calls for the refrigeration module chamber to comprise a top wall and a depending peripheral wall, wherein the top wall is positioned beneath a bottom wall of the cooking chamber. The refrigeration unit 70 of Clark is mounted in an open-top drawer 68 slidably mounted beneath the bottom wall 24 of the chamber 28. The bottom wall 24 forms the only partition between the chamber 28 and the drawer 68 that houses the refrigeration unit 70. Thus, Clark does not disclose a refrigeration module chamber top wall located beneath the bottom wall 24 of the chamber 28, and it would not be obvious to add a wall

beneath the bottom wall 24. The double wall structure between the cooking chamber and the refrigeration module chamber of the present invention facilitates the thermal separation of the refrigeration module from the cooking chamber to protect the refrigeration module. Not only does Clark not disclose such a structure, but the patent does not even mention thermal isolation concerns with respect the refrigeration unit 70. Thus, claim 14 is not obvious in view of Clark.

Claim 15

Claim 15 is patentable because the combination of the Clark and Hirath is improper and, assuming *arguendo* the combination is proper, the combination does not disclose a refrigeration module comprising an insulated housing overlying the evaporator to thermally isolate it from the condenser.

Claim 15 depends from claims 1, 5, and 14, adds the limitation that the top wall of the refrigeration chamber is positioned beneath and spaced from a bottom wall of the cooking chamber to form a gap with insulation disposed within the gap.

Hirath discloses an insulated housing that defines a cavity suitable for a refrigerator or an oven. The housing comprises two spaced-apart layers enclosing a vacuum-tight space which is filled with thermal insulation material.

There is no teaching or suggestion in either Clark or Hirath to make the combination as asserted. The Examiner asserts that the addition of insulation is well known in the art of designing cooking ranges/ovens and refrigerators, and cites Hirath as evidence that the use of insulation between a cooking chamber and a refrigeration module chamber is well known in the art. However, the Examiner position overly extends the teaching of Hirath. Hirath discloses an insulated housing. It does not disclose insulating the space between a oven cavity and a refrigeration cavity in a combination oven/refrigerator as Hirath is concerned only with a single cavity and single function housing. In other words, the Examiner has taken the general teaching of making an insulated housing and applied it to the specific and unique configuration of a combination appliance to say it would be obvious to insulate the space between the oven cavity and the refrigeration cavity. Neither Clark or Hirath disclose any motivation, suggestion, or teaching to combine the Clark and Hirath references in this manner. Therefore, the rejection of

claim 15 must fail as it is based on improperly combined references.

Assuming, arguendo, that the combination is proper, the addition of Hirath does not remedy the shortcomings of Clark with respect to claim 1, as previously discussed. The combination of Clark and Hirath still does not disclose a refrigeration module with an insulated housing overlying the evaporator to thermally isolate the evaporator from the condenser. Thus, claim 1 is non-obvious and patentable over the combination. As claim 15 ultimately depends from claim 1, claim 15 is likewise patentable over the combination

CONCLUSION

In view of the foregoing, it is submitted that the continuing rejection of claims 1-11 and 14-20 is improper and should not be sustained. Therefore, a reversal of the rejection of claims 1-11 and 14-20 is respectfully requested.

Respectfully submitted,
DIANNE D. MUELLER ET AL.

Dated: 11/10/05

By: 

Mark A. Davis, Reg. No.
Michael F. Kelly, Reg. No. 50,859
McGARRY BAIR PC
171 Monroe Avenue, NW, Suite 600
Grand Rapids, Michigan 49503
616-742-3500

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VIII. CLAIMS APPENDIX

1. A combination appliance for cooling and cooking a food item, comprising:

a frame comprising a cooking chamber and a refrigeration module chamber, and the cooking chamber having a first access opening through which access to the interior of the cooking chamber is provided;

a door moveably mounted to the frame for movement between an open position where the first access opening is uncovered and a closed position where the first access opening is covered;

a heat element disposed within the cooking chamber to selectively provide heat to the cooking chamber;

an inlet duct extending between the refrigeration module chamber and the cooking chamber, the inlet duct having an inlet in communication with the refrigeration module chamber and an outlet in communication with the cooking chamber;

a return duct extending between the refrigeration module chamber and the cooking chamber, the return duct having an inlet in communication with the cooking chamber and an outlet in communication with the refrigeration module chamber;

a refrigeration module comprising a compressor, condenser, evaporator, and base on which the compressor, condenser, and evaporator are mounted to form a module, and an insulated housing overlying the evaporator to thermally isolate the evaporator from the condenser, the insulated housing having an inlet and an outlet, which align with the outlet of the return duct and the inlet of the inlet duct, respectively, when the refrigeration module is mounted within the refrigeration module chamber, to thereby form a refrigerated air path between the evaporator and the cooking chamber.

2. The combination appliance according to claim 1 wherein the frame further comprises a second access opening through which access to the interior of the refrigeration module chamber is provided and the second access opening is sized to receive the refrigeration

module.

3. The combination appliance according to claim 2 wherein the refrigeration module chamber comprises a peripheral side wall and the second access opening is located in the peripheral side wall permitting the sliding insertion and removal of the refrigeration module from the refrigeration module chamber through the second access opening.

4. The combination appliance according to claim 3 wherein the frame has a front side and the first and second access openings are located on the front side.

5. The combination appliance according to claim 1 wherein the cooking chamber comprises a top wall, bottom wall, and a peripheral wall connecting the top and bottom walls, and the outlet of the inlet duct and the inlet of the return duct extend through the peripheral wall.

6. The combination appliance according to claim 5 wherein the outlet of the inlet duct is positioned above the inlet of the return duct.

7. The combination appliance according to claim 6 wherein the outlet of the inlet duct is located in an upper portion of the cooking chamber near the top wall.

8. The combination appliance according to claim 7 wherein the inlet of the return duct is located in a lower portion of the cooking chamber near the bottom wall.

9. The combination appliance according to claim 8 wherein the peripheral wall comprises parallel side walls and a rear wall connecting the side walls at rear edges there of to form spaced rear corners of the cooking chamber and the inlet of the return duct is located on either the rear wall and one of the side walls and the outlet of the inlet duct is located on the other of the rear wall and the one of the side walls.

10. The combination appliance according to claim 9 wherein the inlet of the return duct and the outlet of the inlet duct are adjacent the rear corner formed by the rear wall and the one of the side walls.

11. The combination appliance according to claim 5 wherein the inlet duct and the return duct are positioned exteriorly of the cooking chamber.

12. The combination appliance according to claim 11 and further comprising an exterior cabinet mounted to the frame and spaced from the peripheral wall of the cooking chamber to define a gap therebetween in which the inlet duct and the return duct are positioned.

13. The combination appliance according to claim 12 and further comprising insulation disposed within the gap.

14. The combination appliance according to claim 5 wherein the refrigeration module chamber comprises a top wall from which depends a peripheral wall, and the top wall of the refrigeration chamber is positioned beneath the bottom wall of the cooking chamber.

15. The combination appliance according to claim 14 wherein the top wall of the refrigeration module chamber is spaced from the bottom wall of the cooking chamber to form a gap and further comprising insulation disposed within the gap.

16. The combination appliance according to claim 1 wherein at least a portion of the base is thermally conductive and the condenser is conductively mounted to the base to transfer the heat from the condenser to the thermally conductive portion of the base to dissipate the heat from the condenser.

17. The combination appliance according to claim 16 and further comprising at least one thermally conductive mount connecting the condenser to the base whereby the heat from the condenser is conducted to the base through the at least one thermally conductive mount.

18. The combination appliance according to claim 16 wherein the evaporator is thermally isolated from the base to retard the conduction of heat from the base to the evaporator.

19. The combination appliance according to claim 18 wherein at least a portion of the base is made of thermally non-conductive material and the evaporator is mounted to the thermally non-conductive material to thermally isolate the evaporator from the base.

20. The combination appliance according to claim 18 and further comprising a thermally non-conductive mount connecting the evaporator to the base to thermally isolate the evaporator from the base.

21. The combination appliance according to claim 20 wherein the thermally non-conductive mount forms a catch pan and includes a sloped channel having an outlet disposed above the base to collect and drain condensation from the evaporator onto the base.

22. The combination appliance according to claim 21 wherein the thermally non-conductive mount comprises a layer of insulation positioned between the evaporator and the base and in which are formed the catch pan and sloped channel and multiple thermally non-conductive blocks connecting the evaporator to the base.

23. The combination appliance according to claim 21 and further comprising a condenser fan for drawing or blowing air along an air-flow path through the condenser and over the channel to enhance the evaporation of the condensation as it moves down the channel and onto the base.

24. The combination appliance according to claim 23 wherein base forms an evaporator pan for collecting the condensation from the channel and the heat conducted to the base from the condenser enhances the evaporation of the condensation in the evaporator pan.

25. The combination appliance according to claim 24 wherein the condenser fan is positioned on the base such that the condenser air-flow path passes over the evaporator pan to enhance the evaporation of the condensation.

26. The combination appliance according to claim 25 wherein the heat generator is an electric heating element.

IX. EVIDENCE APPENDIX

No evidence has been entered by the Examiner or Appellants into the record.

Examiner: Lilijana V. Ciric
Group Art Unit: 3753

X. RELATED PROCEEDINGS APPENDIX

There being no decision rendered by a court or the Board in any related proceeding, none is listed here.